**Amendments to the Specification:**

Please replace the paragraph beginning at page 1, line 5, with the following rewritten paragraph:

--This invention is a Continuation-In-Part of U.S. Application SN 10/306,960 filed November 27, 2002, now U.S. Patent 7,001,708 that issued on February 21, 2006, which claims the benefit of priority based on U.S. Provisional application No. 60/339,283 filed December 11, 2001 and U.S. Provisional application No. 60/333,972 filed on November 28, 2001, and this invention further claims the benefit of priority based on United States Provisional Application No. 60/463,426 filed April 16, 2003. --

Please replace the paragraph beginning at page 6, line 5, with the following rewritten paragraph:

--The concept of this invention is a multilayer data storage system of at least approximately five layers based on two-photon induced recording and two-photon fluorescence readout technology that consists of a ternary data-encoding scheme. Using a high numerical aperture (NA) objective lens, spatial resolution on the order of 120 nm is possible. This invention utilizes materials and processes disclosed for Belfield's previous binary write-once read-many (WORM) three-dimensional (3-D) optical data storage invention for which a U.S. Patent application SN: 10/306,960 was filed on 11/27/2002, now U. S. Patent 7,001,708 issued February 21, 2006 with a common assignee and by reference thereto is fully incorporated herein. In this approach, photoinduced fluorescence changes in a polymeric medium are employed to a WORM data storage medium with two-photon fluorescence readout. Both image writing and reading will be accomplished via near-IR two-photon excitation of polymer films containing a fluorophore and photoacid generator (PAG).

Furthermore, rather than using the previously disclosed binary encoding scheme, a ternary encoding scheme will be utilized, increasing the data storage capacity by 50%. –

Replace the paragraph beginning at page 7, line 9, with the following rewritten paragraph:

-- The recording medium is cast from a transparent polymer (polystyrene, PMMA, or polycarbonate) impregnated with a photosensitive Photo-Acid Generator (PAG) (commercially available "onium salt" that is currently used in photolithography) and a reactive dye (RD) (a stable ~~fluorine~~ fluorene dye). --